CDF/D0/AD Luminosity Task Force meeting

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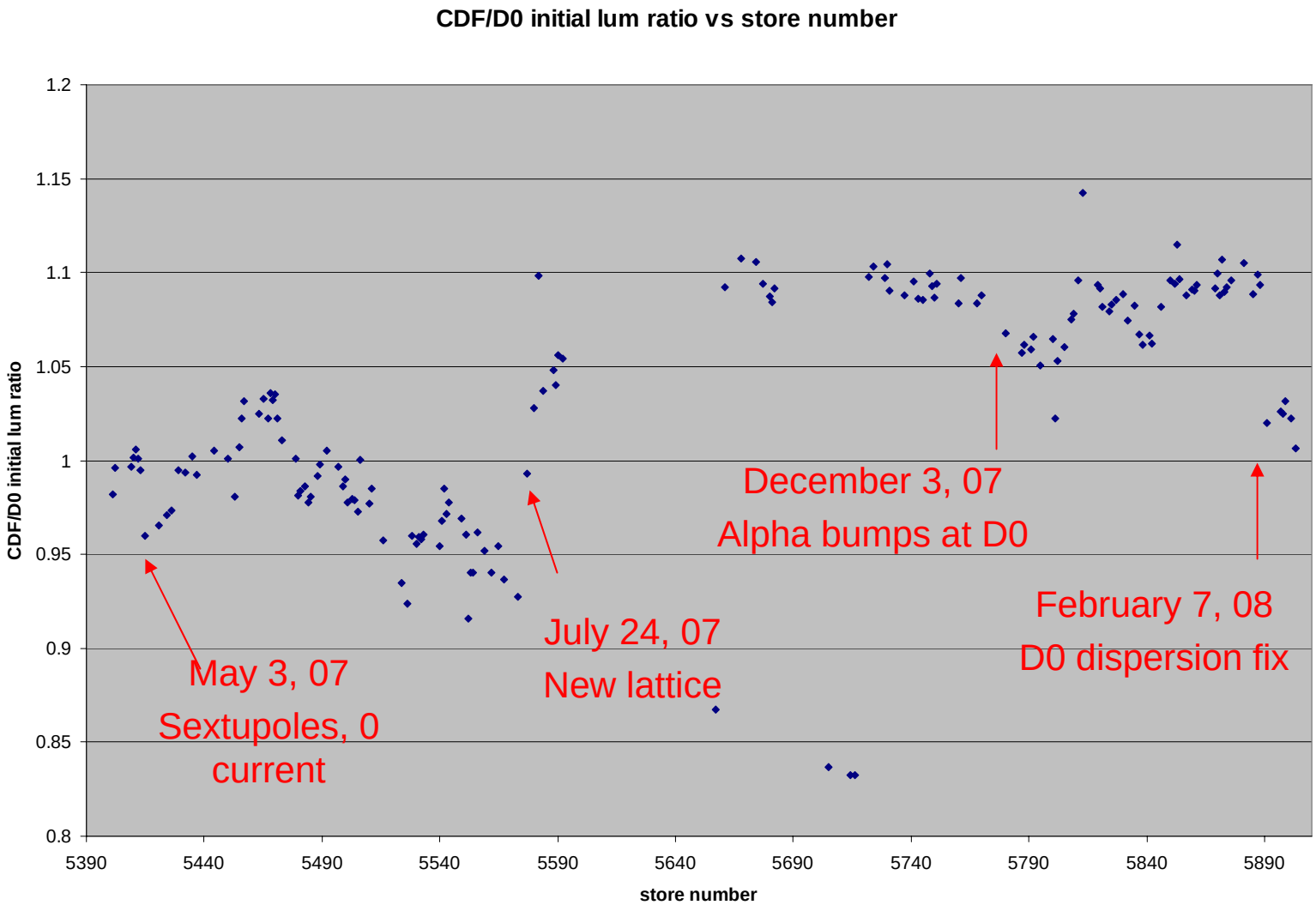
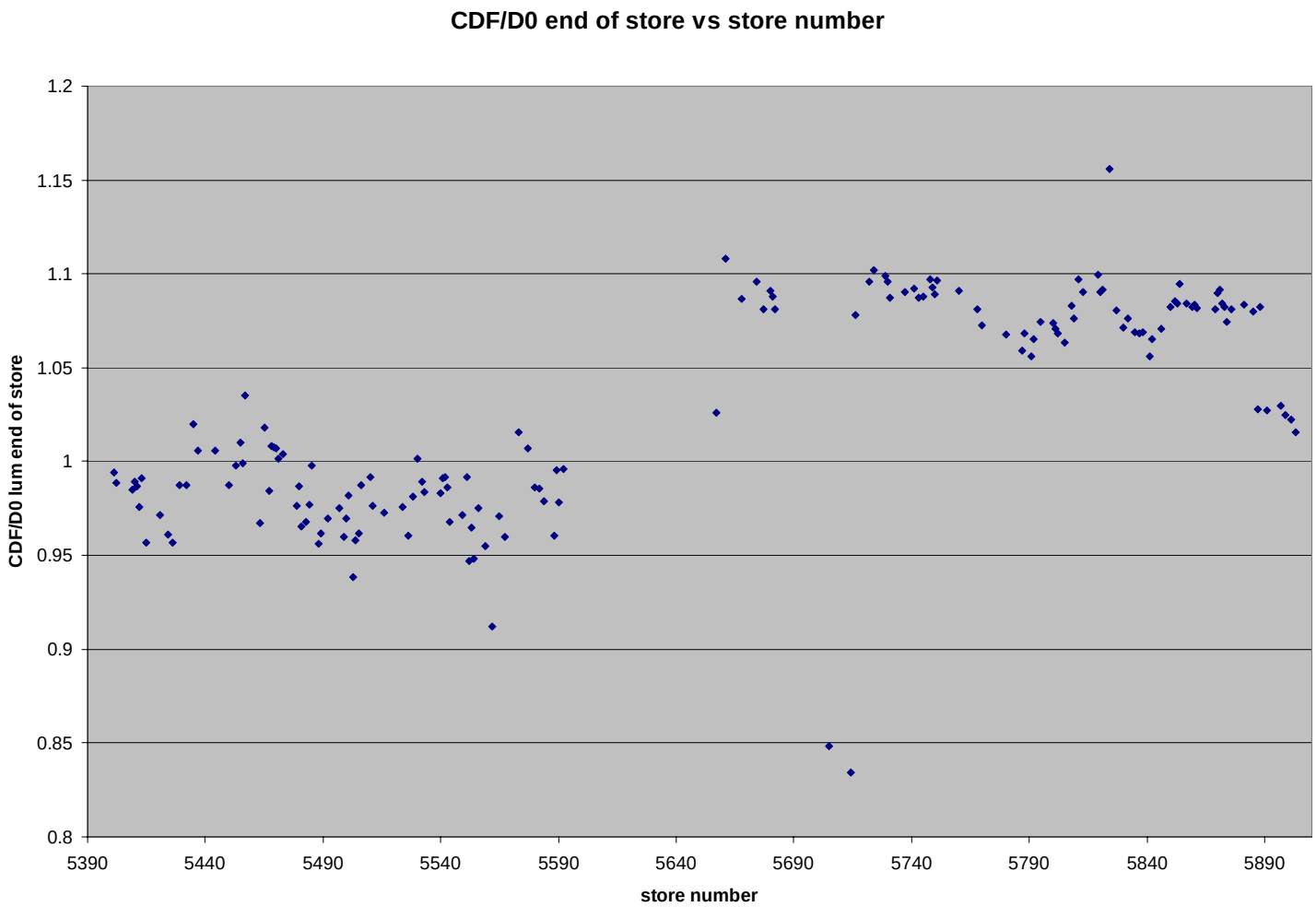
CDF/D0 luminosity ratio and measured vs expected luminosities

February 13, 2008

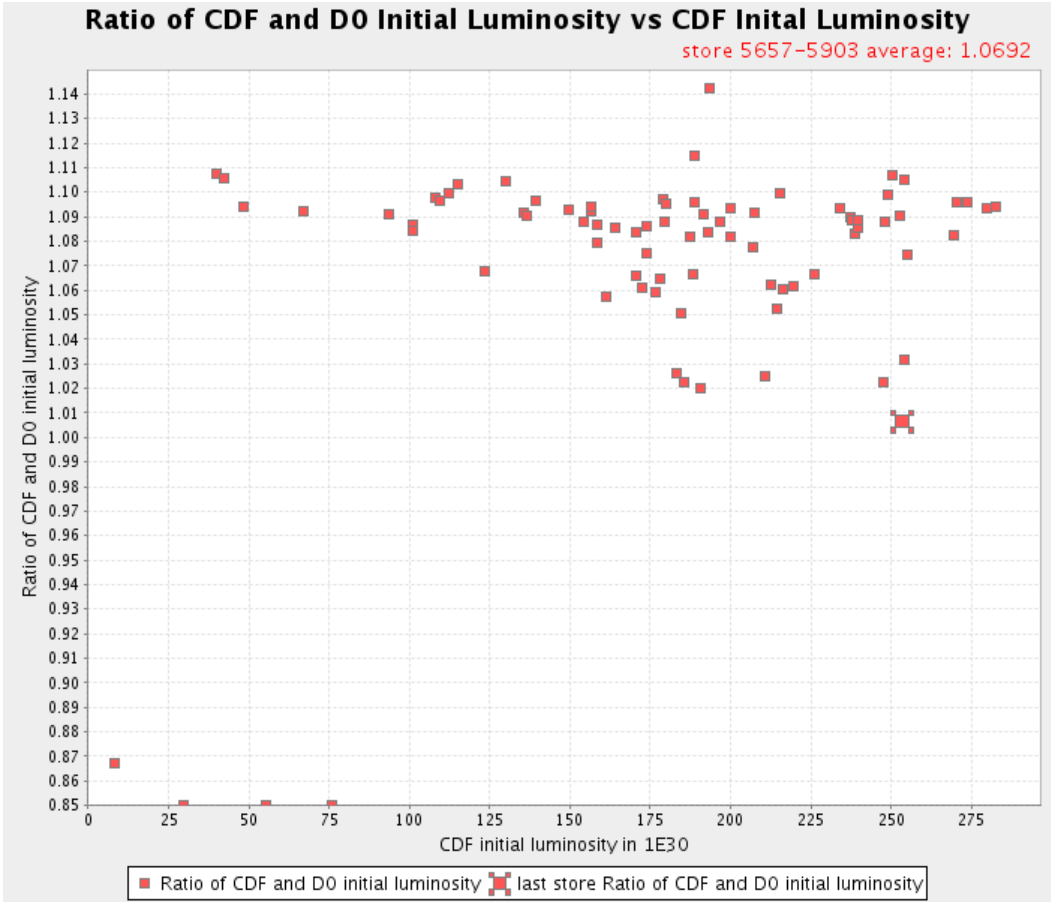
CDF/D0 initial luminosity ratio May 1, 2007 - February 12 2008

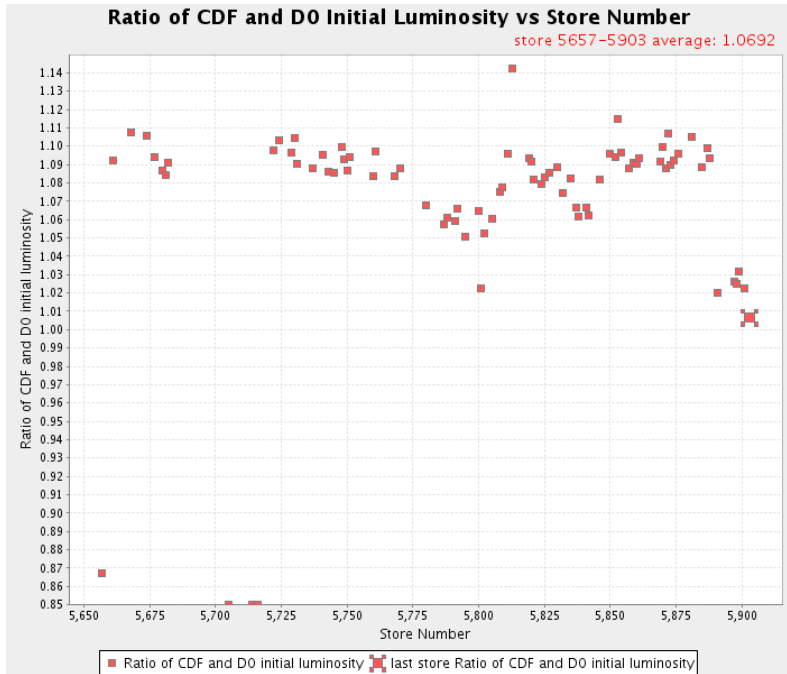


CDF/D0 end of store luminosity ratio May 1, 2007 – February 12, 2008



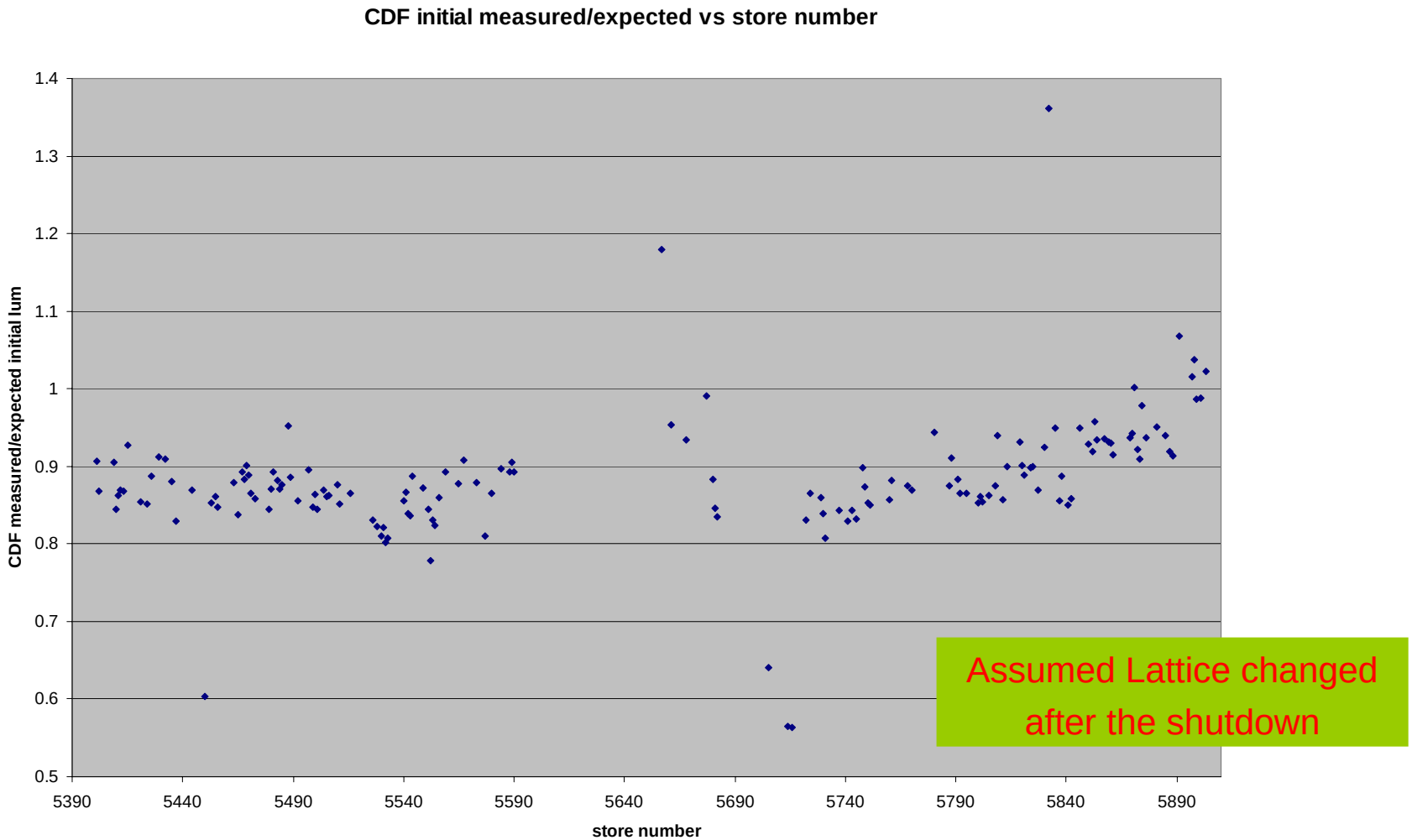
CDF/D0 initial luminosity ratio vs CDF initial luminosity
October 1, 2007 - February 12, 2008





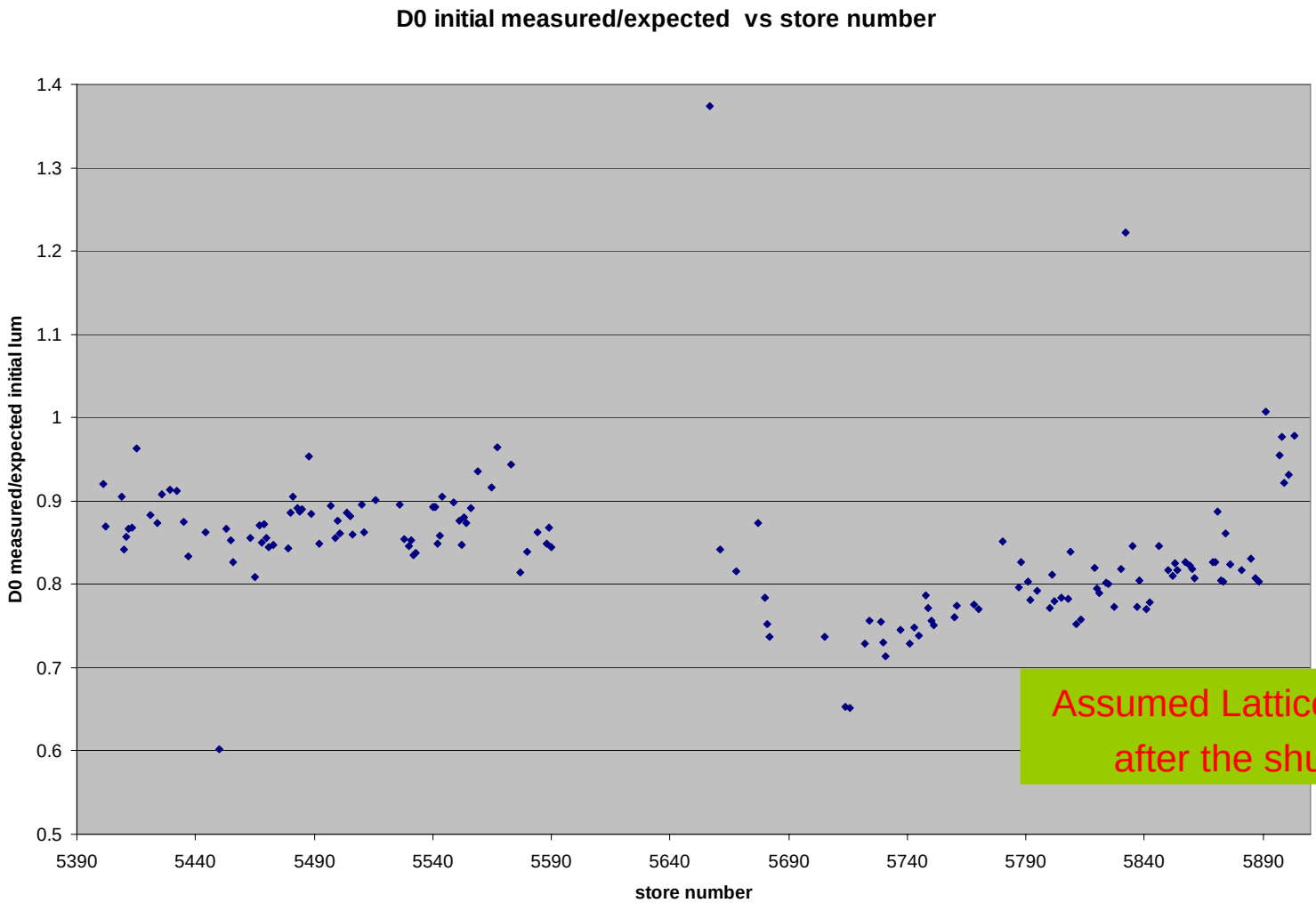
CDF measured over calculated initial luminosity ratio

May 1, 2007 - February 12, 2008



D0 measured over calculated initial luminosity ratio

May 1, 2007 - February 12, 2008



Assumed Lattice changed after the shutdown

Conclusions

After the summer shutdown the CDF/D0 luminosity ratio has been ranging between 1.08 -1.10. After introducing alpha bumps at D0 on Dec. 3 the ratio became 1.068 in store 5780. Recently this ratio became close to 1.1 again and it was fixed on February 7 by correcting the dispersion at D0. The ratio is now ~ 1.02

The CDF and D0 measured luminosities were compared again to the expected ones after a new Tevatron lattice was introduced into SDA for the period after the summer shutdown. Introducing this new lattice did not improve the agreement between measured and expected luminosities, but both IPs have the ratio of measured over expected closer to 1 (within less than 10%) after the dispersion correction at D0.